FACT SHEET FOR NPDES PERMIT NO. WA0022349
City of Sequim

TABLE OF CONTENTS

Page

TABLE OF CONTENTS (cont.)

Page

APPENDICES

INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the State of Washington on the basis of chapter 90.48 RCW which defines the Department of Ecology's authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the State include procedures for issuing permits (chapter 173-220 WAC), technical criteria for discharges from municipal wastewater treatment facilities (chapter 173-221 WAC) and water quality criteria for surface and ground waters (chapters 173-201A and 200 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least 30 days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the Public Notice procedures).

This fact sheet has been reviewed by the Permittee and errors in fact have been corrected. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments (Appendix C) will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix C--Response to Comments.

GENERAL INFORMATION

Applicant:	City of Sequim 152 West Cedar Street Sequim, Washington 98382	**Facility:**	City of Sequim Wastewater Treatment Facility 247 Schmuck Road Sequim, Washington 98382
Discharge Location:	Latitude: 48º 05' 29" N Longitude: 123° 02' 11" W	**Type of Treatment:**	Class A Water Reclamation
Water Body ID Number:	WA-18-0010		

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

The City of Sequim currently operates a secondary wastewater treatment facility comprised of a headworks with screening and grit removal, an oxidation ditch, two secondary clarifiers, and a chlorination contact tank, along with aerobic sludge digesters.

The facility is being upgraded to include a flow equalization basin, filtration, ultraviolet (UV) disinfection, and a retention pond. This upgraded facility is designed to produce Class A reclaimed water

as defined by the Departments of Health and Ecology. The City is seeking over the next few years to implement full reuse of the reclaimed water.

In order to meet water quality standards and to provide for the recertification of valuable shellfish beds, the effluent outfall is being extended approximately 1320 feet to a discharge depth of 50 feet. Once the City has achieved full reuse of the reclaimed water, the outfall will be necessary for emergency discharges only.

History

The current treatment facility was constructed as a secondary treatment facility in 1966 and was significantly modified and expanded in 1983. Most of the original facility was abandoned or converted to other uses, and much of the current facility was constructed at that time. The facility was designed for an average flow of 0.65 MGD and a peak flow of 3.0 MGD. There were also improvements constructed in 1993 consisting of additional aeration in the oxidation ditch, a new secondary clarifier, sludge pumping improvements, improved scum removal and dechlorination.

The most recent NPDES permit for the facility, issued in 1985, required the City to extend the effluent outfall if it was determined to maintain the marine discharge. The decision to maintain and extend the marine outfall resulted in a denial of the necessary Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife and subsequent legal challenges. A settlement agreement signed in 1994 by the Departments of Ecology and Fish and Wildlife (WDFW) and the City provided for issuance of the HPA for the outfall extension. For its part, the City committed to upgrade the treatment facility to produce Class A reclaimed water. The intent of all parties to the agreement is for the City to, in time, achieve full reuse of the reclaimed water, and to use the outfall for emergency discharge only.
The upgrade of the treatment facility began in May 1997 and should be completed by June 1998. Extension of the outfall continued to be challenged by Protect the Peninsula's Future (PPF) until June 1997, when a settlement agreement was signed among the City, PPF, Ecology, WDFW and the Department of Natural Resources (DNR). Construction of the outfall extension is scheduled to occur in October 1997.

Collection System Status

Construction of the collection system was begun in the 1930's, and the main trunk to the treatment facility was constructed at that time. Much of the system was constructed later from the 1950's to the mid-1970's; this construction is of concrete pipe. More recent construction is of PVC plastic pipe. The majority of the collection system is gravity sewers.

The system receives significant amounts of infiltration and inflow (I/I) during heavy rainfall. The extraneous flow takes up needed capacity in the collection system and reduces the efficiency of treatment at the treatment facility. Construction of a flow equalization basin at the treatment facility will provide improved treatment of peak flows, but continued improvements to the collection system will be necessary to provide adequate collection and transport capacity in the future.

Treatment Processes

The headworks contains a manually cleaned coarse bar screen, a parallel manually cleaned bar screen, a Parshall flume for flow measurement, and a grit removal chamber. Screenings are disposed of at a landfill. Secondary waste sludge is treated with aerobic digestion and applied to forest land.

After screening and grit removal, the wastewater enters the oxidation ditch, which is aerated by both brush rotors and floating aerators. Following the current upgrade, flows exceeding 1.8 MGD will be diverted to an equalization basin until peak flows abate. This equalization capacity will significantly improve treatment of peak flows at the facility.

From the oxidation ditch, the wastewater flows to the secondary clarifiers. With the upgrade, the clarifier effluent will be filtered through rapid sand filters and then disinfected with ultraviolet (UV) radiation. To improve reliability at the facility, a retention pond is being constructed to hold the effluent in the event of a process failure. The pond is designed to hold the equivalent of four days average flow.

Discharge Outfall

Currently, the outfall discharges approximately 600 feet offshore in about ten feet of water. With the proposed extension, the outfall will discharge approximately 1320 feet offshore in about 50 feet of water. The diffuser will be 200 feet in length with sixteen (16) ports of four (4) inch diameter. Initially, only eight (8) of the ports will be open. Mixing and dispersion of the discharge will be greatly improved with the construction of the outfall extension.

PERMIT STATUS

The previous permit for this facility was issued on January 25, 1985; the permit was extended on November 29, 1989, until further notice. The previous permit placed effluent limitations on 5-day Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), pH, and Fecal Coliform bacteria.

An application for permit renewal was submitted to the Department on September 10, 1996, and accepted by the Department on September 30, 1996.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility received a Class 2 inspection on March 8, 1995.

Over the past three years of Discharge Monitoring Report (DMR) data evaluated, the Permittee has been in consistent compliance with few violations.

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the NPDES application and in discharge monitoring reports. Based on three years of data, from January 1994 through January 1997, the effluent is characterized as follows:

Parameter	Average	Maximum Month
Flow	0.443 MGD	0.775 MGD
Effluent BOD_5	8 mg/l	14 mg/l
	29 lb/day	96 lb/day
Effluent TSS	6 mg/l	13 mg/l
	23 lb/day	89 lb/day
Residual Chlorine	0.6 mg/l	0.9 mg/l
Fecal Coliform	72/100 ml	92/100 ml

PROPOSED PERMIT LIMITATIONS AND CONDITIONS

Generally, Federal and State regulations require that effluent limitations set forth in a NPDES permit must be either technology-based or water quality-based. Technology-based limitations for municipal discharges are set by regulation (40 CFR 133, and chapters 173-220 and 173-221 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (chapter 173-201A WAC), Ground Water Standards (chapter 173-200 WAC) or Sediment Quality Standards (chapter 173-204 WAC). The more stringent of these types of limits must be chosen for each of the parameters of concern.

Due to the implementation of the 1994 and 1997 Sequim Settlement Agreements, the Permittee has committed to, and will be required to, produce and discharge Class A reclaimed water from the extended outfall, subject to the limitations identified in the permit. The standards for Class A reclaimed water are technology-based standards outlined in the document, Water Reclamation and Reuse Standards, (Departments of Health and Ecology, 1997). For the parameters addressed in the Class A reclaimed water standards, the limitations are equal to or more stringent than the technology-based or water quality-based standards required by federal and state law. For those parameters not addressed in the Class A reclaimed water standards, the appropriate technology-based or water quality-based standards have been applied.

DESIGN CRITERIA

In accordance with Washington Administrative Code (WAC) 173-220-130(1)(a), effluent limitations shall not be less stringent than those based upon the design criteria for the facility, which are contained in approved engineering plans, reports, or approved revisions. Also, in accordance with WAC 173-220-150 (1)(g), flows or waste loadings shall not exceed approved design criteria.

The design criteria for this treatment facility are taken from the City of Sequim Comprehensive Wastewater Facilities Plan, August 1992, and the Wastewater Facilities Plan Amendment, September 1995, and are as follows:

Parameter	Value
Maximum Month average flow	0.8 mgd
Instantaneous peak flow (equalized)	1.8 mgd
Maximum Month Influent BOD_5	1725 lb/day
Maximum Month Influent TSS	1450 lb/day

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Municipal wastewater treatment plants are a category of discharger for which technology-based effluent limits have been promulgated by federal and state regulations. These effluent limitations are given in the Code of Federal Regulations (CFR) 40 CFR Part 133 (federal) and in chapter 173-221 WAC (state). These regulations are performance standards that constitute all known available and reasonable methods of prevention, control, and treatment for municipal wastewater.

Conventional Limits

The following technology-based limits for pH, fecal coliform, BOD_5, and TSS are taken from chapter 173-221 WAC:

Parameter	Average Monthly Limit	Average Weekly Limit
BOD_5	30 mg/l or 15 percent of the average influent concentration, whichever is more stringent	45 mg/l
TSS	30 mg/l or 15 percent of the average influent concentration, whichever is more stringent	45 mg/l
Fecal Coliform Bacteria	200 colonies/100ml (Geometric Mean)	400 colonies/100ml (Geometric Mean)
pH	within range of 6 to 9 standard units	

The following technology-based mass limits are based on WAC 173-220-130(3)(b) and 173-221-030(11)(b).

> Monthly effluent mass loadings (lbs/day) were calculated as maximum monthly design flow (0.8 mgd) x Concentration limit (30 mg/L) x 8.34 (conversion factor) = mass limit (200 lbs/day). The weekly average effluent mass loading is calculated as 1.5 X monthly loading = 300 lbs/day.

Class A Reclaimed Water Limits

The state of Washington passed legislation in 1992 which provided for the development of a process to encourage and implement water reclamation and reuse. In response to this legislation, RCW 90.46, and subsequent amendments, the Departments of Health and Ecology developed the Water Reclamation and Reuse Standards, 1997. These standards outline requirements for the level of treatment technology as well as technology-based water quality limits necessary to protect public health in the reuse of reclaimed water. These standards include requirements for four classes of reclaimed water, Classes A,B,C and D. Class A is the highest quality of reclaimed water, and therefore, provides the broadest range of reuse opportunities. Conversely, Class A reclaimed water requires the most stringent treatment and water quality limitations.

The technology and water quality requirements for the production of Class A reclaimed water, as cited in the Water Reclamation and Reuse Standards, 1997, are as follows:

> "Class A Reclaimed Water" is reclaimed water that, at a minimum, is at all times an oxidized, coagulated, filtered, disinfected wastewater.
>
> 1. Oxidized wastewater is defined as a wastewater in which the organic matter has been stabilized such that the biochemical oxygen demand (BOD_5) does not exceed 30 mg/l and the total suspended solids (TSS) do not exceed 30 mg/l, is nonputrescible, and contains dissolved oxygen.

2. Coagulated wastewater is defined as an oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated prior to filtration by the addition of chemicals or by an equally effective method.

3. Filtered wastewater is defined as an oxidized, coagulated wastewater which has been passed through natural undisturbed soils or filter media, such as sand or anthracite, so that the turbidity as determined by an approved laboratory method does not exceed an average operating turbidity of 2 nephelometric turbidity units (NTU), determined monthly, and does not exceed 5 NTU at any time.

4. Adequate disinfection is defined as the median number of total coliform organisms in the wastewater after disinfection does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last seven (7) days for which analyses have been completed, and the number of total coliform organisms does not exceed 23 per 100 milliliters in any sample.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state.

Water quality criteria set forth in the State of Washington's Water Quality Standards for Surface Waters (chapter 173-201A WAC) specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

Description of the Receiving Water

The facility discharges to the Strait of Juan de Fuca, which is designated as a Class AA receiving water in the vicinity of the outfall. There are no other nearby point source outfalls. Significant nearby non-point sources of pollutants include agricultural runoff and septic drainfields. Characteristic uses include the following:

> fish migration, fish and shellfish rearing, spawning and harvesting, wildlife habitat, secondary contact recreation, sport fishing, boating and aesthetic enjoyment, commerce and navigation.

Water quality of this class shall markedly and uniformly exceed the requirements for all or substantially all uses. Applicable water quality criteria are defined in chapter 173-201A WAC for aquatic biota. Water quality criteria for Class AA water bodies are:

Parameter	Criteria
Fecal Coliforms	14 colonies/100 mL maximum geometric mean
Dissolved Oxygen	7 mg/L minimum
Temperature	13 degrees Celsius maximum
pH	7.0 to 8.5 standard units

Turbidity	less than 5 NTU above background
Toxics	No toxics in toxic amounts

Mixing Zone

The Water Quality Standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available, and reasonable methods of prevention and control (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

Pollutant concentrations in the proposed discharge may exceed water quality criteria with technology-based controls which the Department has determined to be AKART. A mixing zone is authorized in accordance with the geometric configuration, flow restriction, and other restrictions for mixing zones in chapter 173-201A WAC. The authorized mixing zones are defined as follows:

Chronic: 260 feet in each direction from the discharge point
Acute: 26 feet in each direction from the discharge point

The dilution factors of effluent to receiving water that occur within these zones have been determined at the critical condition by the use of the model UDKHDEN. The dilution factors have been determined to be:

Acute: 105
Chronic: 160

The impacts of dissolved oxygen deficiency, temperature, pH, fecal coliform, and ammonia were determined as shown below, using the dilution factors described above:

BOD: This discharge with technology-based limitations results in a small amount of BOD loading relative to the large amount of dilution occurring in the receiving water at critical conditions. Technology-based limitations will be protective of dissolved oxygen criteria in the receiving water.

Temperature: There is no predicted violation of the Water Quality Standards for Surface Waters. Therefore, no effluent limitation for temperature was placed in the proposed permit

pH: Because of the high buffering capacity of marine water, compliance with the technology-based limits of 6 to 9 will assure compliance with the Water Quality Standards for Surface Waters.

Fecal coliform: Based on the Class A reclaimed water requirements for total coliform, there is no predicted violation of the Water Quality Standards for Surface Waters. Also, the technology-based effluent limitation for fecal coliform bacteria which will apply during defined upset conditions is not expected to result in a violation of the Water Quality Standards for Surface Waters.

Ammonia: Based on the low levels of ammonia in the discharge and the amount of available dilution, there is no expected violation of the Water Quality Standards for Surface Waters.

The Water Quality Standards require that discharges into a receiving water shall not further degrade the existing water quality of the water body, and that beneficial uses must be protected. The Department will use the designated classification criteria for this water body, Class AA (Extraordinary), in the proposed

permit. The discharges authorized by this proposed permit are not expected to cause a degradation of existing water quality or of beneficial uses.

Whole Effluent Toxicity

The Water Quality Standards for Surface Waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity.

Acute toxicity tests measure mortality as the significant response to the toxicity of the effluent. Dischargers who monitor their wastewater with acute toxicity tests are providing an indication of the potential lethal effect of the effluent to organisms in the receiving environment.

Chronic toxicity tests measure various sublethal toxic responses such as retarded growth or reduced reproduction. Chronic toxicity tests often involve either a complete life cycle test of an organism with an extremely short life cycle or a partial life cycle test on a critical stage of one of a test organism's life cycles. Organism survival is also measured in some chronic toxicity tests.

If acute or chronic toxicity is measured during effluent characterization at levels that, in accordance with WAC 173-205-050(2)(a), have a reasonable potential to cause receiving water toxicity, then the proposed permit will set a limit on the acute or chronic toxicity. The proposed permit will then require the Permittee to conduct WET testing in order to monitor for compliance with either an acute toxicity limit, a chronic toxicity limit, or both an acute and a chronic toxicity limit. The proposed permit also specifies the procedures the Permittee must use to come back into compliance if the limits are exceeded.

Accredited WET testing laboratories have the proper WET testing protocols, data requirements, and reporting format. Accredited laboratories are knowledgeable about WET testing and capable of calculating an NOEC, LC_{50}, EC_{50}, IC_{25}, etc. Ecology recommends that Permittees send a copy of the acute or chronic toxicity sections(s) of their permits to their laboratory of choice.

When the WET tests during effluent characterization indicate that no reasonable potential exists to cause receiving water toxicity, the Permittee will not be given WET limits and will only be required to retest the effluent prior to application for permit renewal in order to demonstrate that toxicity has not increased in the effluent.

If the Permittee makes process or material changes which, in the Department's opinion, results in an increased potential for effluent toxicity, then the Department may require additional effluent characterization in a regulatory order, by permit modification, or in the permit renewal. Toxicity is assumed to have increased if WET testing conducted for submission with a permit application fails to meet the performance standards in WAC 173-205-020, "whole effluent toxicity performance standard". The Permittee may demonstrate to the Department that changes have not increased effluent toxicity by performing additional WET testing after the time the process or material changes have been made.

Sediment Quality

The Department has promulgated aquatic sediment standards (chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

The Department has determined through a review of the discharger characteristics and effluent characteristics that this discharge has no reasonable potential to violate the Sediment Management Standards. However, a requirement has been placed in the proposed permit which requires the Permittee to perform a sediment investigation of the previously permitted discharge site and to perform a baseline study of the new discharge site. This requirement is in response to a commitment during settlement discussions and in concurrence with a request from DNR.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (chapter 173-200 WAC) to protect uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

Permittee has no discharge to ground at this time, and therefore no limitations are required based on potential effects to ground water. If groundwater recharge of the reclaimed water is initiated in the future, the need for limitations will be reevaluated.

COMPARISON OF MONTHLY EFFLUENT LIMITS WITH THE EXISTING PERMIT

Existing Limits	**Proposed Limits**
BOD_5 30 mg/l, 164 #/day	BOD_5 30 mg/l, 200 #/day
TSS 30 mg/l, 164 #/day	Turbidity 2 NTU
pH 6 to 9	pH 6 to 9
Fecal Coliform 200/100ml	Total Coliform 2.2/100ml

MONITORING AND REPORTING

Effluent monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

Monitoring of sludge quantity and quality is necessary to determine the appropriate uses of the sludge. Sludge monitoring is required by the current state and local solid waste management program and also by EPA under 40 CFR 503.

The monitoring and testing schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring. The required monitoring frequency is consistent with agency guidance given in the current version of the Department Permit Writer's Manual and the Water Reclamation and Reuse Standards, 1997. The frequency of monitoring is considered to be the minimum frequency to document compliance.

OTHER PERMIT CONDITIONS

PREVENTION OF FACILITY OVERLOADING

Overloading of the treatment plant is a violation of the terms and conditions of the permit. To prevent this from occurring, RCW 90.48.110 and WAC 173-220-150 require the Permittee to take the actions detailed in proposed permit requirement S.4. to plan expansions or modifications before existing capacity is reached and to report and correct conditions that could result in new or increased discharges of pollutants. Condition S.4. restricts the amount of flow.

OPERATION AND MAINTENANCE (O&M)

The proposed permit contains condition S.5. as authorized under RCW 90.48.110, WAC 173-220-150, chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

RESIDUAL SOLIDS HANDLING

To prevent water quality problems the Permittee is required in permit condition S7. to store and handle all residual solids (grit, screenings, scum, sludge, and other solid waste) in accordance with the requirements of RCW 90.48.080 and State Water Quality Standards.

The final use and disposal of sewage sludge from this facility is regulated by U.S. EPA under 40 CFR 503. The disposal of other solid waste is under the jurisdiction of the Clallam County Health Department

PRETREATMENT

An industrial user survey may be required by the Department to determine the extent of compliance of all industrial users of the sanitary sewer and wastewater treatment facility with federal pretreatment regulations (40 CFR Part 403 and Sections 307(b) and 308 of the Clean Water Act), with state regulations (chapter 90.48 RCW and chapter 173-216 WAC), and with local ordinances. This survey is not deemed to be necessary at this time.

WATER REUSE

The Permittee has been designated as a water reuse pilot project by the Department of Health and is currently upgrading the treatment facility to produce Class A reclaimed water. The Class A reclamation facility is expected to be complete in the spring of 1998. The Permittee has expressed intent to implement a water reuse program to reuse 100 percent of the reclaimed water produced at the treatment facility.

The water reuse plan required by the permit will address alternatives and engineering requirements for the proposed water reuse system. The plan will also address public health issues with the system and surface water and groundwater quality issues with the proposed reuse sites. Each reuse site not under the direct control of the Permittee requires a binding agreement between the Permittee and the user which addresses construction, operation and maintenance, and monitoring of the site.

The water reuse requirements for use site responsibilities, recordkeeping and reporting, operation and maintenance, cross-connection control, and public notice are designed to provide the maximum level of system reliability possible to ensure the protection of public health.

OUTFALL EVALUATION

Proposed permit condition S13. requires the Permittee to conduct an outfall inspection and submit a report detailing the findings of that inspection. The purpose of the inspection is to determine the

condition of the discharge pipe and diffusers and to determine damage has occurred or if sediment is accumulating in the vicinity of the outfall.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual NPDES permits issued by the Department.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards, Sediment Quality Standards, or Ground Water Standards, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to protect human health, aquatic life, and the beneficial uses of waters of the State of Washington. The Department proposes that this permit be issued for five years.

REVIEW BY THE PERMITTEE

A proposed permit was reviewed by the Permittee for verification of facts. Only factual items were corrected in the draft permit and fact sheet.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Metcalf and Eddy.
1991. Wastewater Engineering, Treatment, Disposal, and Reuse. Third Edition.

Tsivoglou, E.C., and J.R. Wallace.
1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Water Pollution Control Federation.
1976. Chlorination of Wastewater.

Wright, R.M., and A.J. McDonnell.
1979. In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(EE2). (Cited in EPA 1985 op.cit.)

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on August 27, 1997, in the *Forks Forum* and the *Sequim Gazette* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) in the *Sequim Gazette* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and the reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone at 360-407-6279, or by writing to the address listed above.

APPENDIX B--GLOSSARY

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Class 1 Inspection--A walk-through inspection of a facility that includes a visual inspection and some examination of facility records. It may also include a review of the facility's record of environmental compliance.

Class 2 Inspection--A walk-through inspection of a facility that includes the elements of a Class 1 Inspection plus sampling and testing of wastewaters. It may also include a review of the facility's record of environmental compliance.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Combined Sewer Overflow (CSO)--The event during which excess combined sewage flow caused by inflow is discharged from a combined sewer, rather than conveyed to the sewage treatment plant because either the capacity of the treatment plant or the combined sewer is exceeded.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected

at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Daily Maximum Discharge Limitation--The greatest allowable value for any calendar day.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the effluent fraction.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Infiltration and Inflow (I/I)--"Infiltration" means the addition of ground water into a sewer through joints, the sewer pipe material, cracks, and other defects. "Inflow" means the addition of rainfall-caused surface water drainage from roof drains, yard drains, basement drains, street catch basins, etc., into a sewer.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (chapter 173-201A WAC).

Monthly Average--The average of the measured values obtained over a calendar month's time.

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the State of Washington, have been delegated the authority to issue these

permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both State and Federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C--RESPONSE TO COMMENTS

RESPONSE TO COMMENTS
NPDES PERMIT NO. WA0022349
CITY OF SEQUIM WATER RECLAMATION FACILITY

This Response to Comments (RTC) document summarizes comments submitted on the draft permit during the public comment period and presents the response from the Department of Ecology (Ecology). The RTC is considered an appendix to the fact sheet and notes any revisions made in the draft permit. Changes are not made to the fact sheet.

Department of Natural Resources (DNR)

Comment:

Recent sediment data from the current and proposed outfall locations suggest that no further action is warranted at this time, and Ecology's evaluations associated with the NPDES renewal process suggest limited potential for violation of the Sediment Management Standards as a result of continued discharge at the site. However, DNR encourages Ecology to reevaluate this potential impact during each renewal of the NPDES permit, including, if applicable, consideration of sediment sampling as a required permit monitoring provision.

Response:

Comment acknowledged. Upon renewal of the NPDES permit, Ecology will reevaluate the need for sediment monitoring at the outfall discharge location.

Comment:

DNR encourages the active pursuit and achievement of full reuse of the reclaimed water which would result in the use of the outfall for emergency discharges only, and we look forward to working with Ecology and the City of Sequim on the realization of this goal.

Response:

Comment acknowledged.

Department of Health (DOH)

Comment:

Permit condition S1.B.2. The listing of 0.2 for dissolved oxygen is unclear and units are not provided.

Response:

The value of 0.2 is in error; the table should read "present" as required for dissolved oxygen. The presence of dissolved oxygen is a requirement of the Class A reclaimed water standards. This is changed in the final permit.

Comment:

The draft permit and fact sheet should be reviewed by George Schlender and/or Craig Riley (DOH Water Reuse Program).

Response:

The permit was drafted with input from George Schlender and was reviewed by him prior to issuance for public comment.

Comment:

Fact Sheet, p. 3. The eight ports to be initially closed on the diffuser should be spread out along its axis in order to retain, in effect, approximately a 200-foot diffuser.

Response:

Comment noted and relayed to the City.

Comment:

Some discussion on the UV disinfection unit in the fact sheet would be pertinent, regarding the type(s) of alarms, monitors and redundancies with the unit which contribute to reliability.

Response:

The Treatment Processes discussion is meant to present summary information only. Detailed information on the ultraviolet disinfection system, including alarms, monitors, and redundancy is available upon request from the City or from Ecology.

Betty Joyce Enbysk - Comments on the Fact Sheet

Comment:

The Permit Writer should be congratulated for this effort. It would have been a difficult task to bring one permit from 1985 into the 21st century - and this job has required bringing two permits to reality. Congratulations on an excellent job.

Response:

Comment acknowledged and appreciated.

Comment:

The 1997 and prior "agreements" are not binding on the general citizenry who may respond to this fact sheet and draft or may choose to challenge the final before the PCHB pursuant to RCW 43.21B.110. If the draft comments receive satisfactory explanations or expansions in the final permit there would of course be no need to challenge. I trust that will be the case in this exercise.

My comments for the most part are an attempt to increase clarity for public understanding. It seems likely that public attention will be directed at fulfillment of permit requirements and schedules as defined in the permit. The enforcement and oversight of the many agreements would be up to the signators.

Response:

This permit has been developed, above all, to be protective of public health and water quality. To the extent possible and reasonable, it addresses the issues and concerns raised by various interested parties. However, it is acknowledged that the 1997 settlement agreement, which was signed in good faith among the involved parties, or any prior agreements, do not preclude a general citizen from challenging the permit. This is true even if the general citizen is a member of one of the settlement parties.

Comment:

Introduction. Close enough - some confusion as to Appendix D mentioned and Appendix C of Fact Sheet.

Response:

The reference to Appendix D is in error; the reference should be to Appendix C.

Comment:

Introduction. You may recall that lengthy public meetings were held and that in 4/30/92 a CAP was developed as a result of Sierra Club Legal Defense Fund suit and year of public hearings (EPA) and WDOE negotiations. EPA delegation is subject to EPA oversight.

Response:

Comment acknowledged.

Comment:

General Information. Perhaps you should check out the location with a good GPS - it has never been accurately placed on any document map or chart.

Response:

This comment is assumed to be referring to the outfall discharge location. We took latitude and longitude information from the new application. Comment noted.

Comment:

Page 2. The sentence, "Once the city has achieved full reuse of the reclaimed water ('over the next few years') the outfall will be necessary for emergency discharges only. "Emergency discharge" is nowhere defined - not in the fact sheet glossary or in Permit Writer's Manual glossary. "Upset condition" is defined on permit page 8 and 9 under S1.B.3. Is this what is meant? It appears that the outfall may used as a dump when flow exceeds twice the plant's maximum daily hydraulic capacity within a 48-hour period or when Class A water cannot be achieved due to acts of nature etc. (The plant's peak flow is 3.0 MGD* and the Outfall design criteria are 1.5 MGD and monthly average not exceed .654 MGD.) On page 28 of Draft permit at E. Bypass we find "water not meeting Class A requirement must be retained or discharged to the marine outfall. Is this the "emergency discharge"? This sounds like a bypass. The decision to bypass must meet the requirements of G4 and G5. I realize that from time to time 'shit happens' and it is impossible to get all the possibilities into a fact sheet. My concern is that marine biota be given equal protection as golf courses or car washes. (*equalized 1.8 MGD - Application a II-2, Items 8,9, or 10 seems not to account for the "holding pond" mentioned in Item 11. This must have been corrected by September 30, 1996 acceptance, OK? How could the S1.A. Interim Limitations be determined in an "upset"?)

Response:

The City must meet the Class A criteria cited in S2.B.2. whether discharging to marine water or distributing to the reuse system. If the marine discharge does not meet the criteria in S2.B.2., it will be considered a NPDES permit violation. The only exclusion to the requirements of S2.B.2. for a marine discharge is in the event of an "upset" condition as defined in S2.B.3. If an upset condition meeting the definition in S2.B.3* occurs, the marine discharge requirements revert to the limits cited in S1.A., Interim Effluent Limitations, which are secondary treatment standards. A discharge meeting the interim limits would not cause an exceedance of the water quality standards. (*At this time the maximum daily hydraulic capacity of the reclamation facility is 1.8 mgd.) These marine discharge criteria and the "upset" condition requirements were negotiated in the 1997 Settlement Agreement.

If reclaimed water is being reused, under the Water Reclamation and Reuse Standards, an alternative to the reuse system must be available for use in the event the reclaimed water does not meet Class A criteria for reuse. This "alternative" must be either an emergency discharge, i.e., a backup outfall, or 20 days of storage. An "emergency discharge" to marine water will occur if the reclaimed water cannot meet Class A requirements and cannot be held for additional treatment. This emergency discharge of water not meeting Class A criteria (S2.B.2.) will be considered an NPDES permit violation if the facility is not in an upset condition meeting S2.B.3. This is not considered a "bypass" as discussed in S13.E., the distribution of inadequately treated reclaimed water, i.e., water not meeting Class A requirements, to the point of reuse. Rather, an emergency discharge is provided to prevent a bypass of non-Class A water to the public. The City must meet the requirements of G4., G5., and S13.C.4. as appropriate.

Biodiversity is affected whenever any of us builds a house or drives a car or eats farm produce or processed food. The intent of this permit is to try to minimize the environmental impacts of the City's discharge to the extent reasonable and appropriate. The protection given to the golf courses and car washes referred to is not for the sites themselves, but for the people that use them. So in that sense the Departments of Ecology and Health must place a higher value on human health than on that of the marine biota.

Comment:

History, Page 4. This section is necessarily brief but should somehow include a list of "agreements" that have relation to the Permit and these agreements should be sufficiently described, numbered or labeled so as to be recoverable by the public. Perhaps in the References section of the fact sheet. References in the text to e.g. "requirement in response to a commitment during settlement discussions and in concurrence with a request from DNR" - see Fact Sheet, Page 9, Sediment Quality, and on Fact Sheet page 4, the "implementation of the 1994 and 1997 Sequim Settlement Agreements" do not provide adequate documentation for permitting. For example the "concurrence with a request from DNR" should refer to Easement WDNR June 1997, Number 20-01312B. The "settlement agreements should be referenced to WDOE Order #94-2-01866 (March 14, 1996) which received First Amendment June 20, 1997 Administrative Order (David Bradley, Environmental Review and Sediment Section) "all other conditions to remain the same". The HPA reference should be to HPA #00-67376-01. The MOA between the Jamestown S'Klallam and the City of Sequim noted in Order #94-2-01866 seems to have disappeared from consideration in this permit as to expected time (five years) to accomplish total on land disposal and radius from outfall to be protected for shellfish harvesting.

One "settlement" not mentioned is the February 20, 1991 agreement by and between Protect the Peninsula's Future and the City of Sequim resulting (sec) from U.S District Court for the Western District of Washington Cause Number C89-1668 with subsequent oversight by Judge John C. Coughhauer July 19, 1992. This agreement is in effect until the Expiration Date of this permit (June 30, 2002). Among other considerations is the joint request to WDOE that under provision 2.6.1 "Discharge limits as set forth in section S1. of the NPDES Permit are to include those shown in schedule III below:

Effluent Limitations

Parameter	Monthly Average	Weekly Average
BOD_5	20 mg/l, * lbs/day	40 mg/l, * lbs/day
Suspended Solids	20 mg/l, * lbs/day	40 mg/l, * lbs/day

* The pounds per day shall be a function of the "monthly average quantity of effluent discharged" as shown in permit.

Other considerations in this agreement relative to this permit are included in Attachment 2 pages 5 and 6 of this comment.

Response:

The Fact Sheet is meant to provide summary background information on the treatment facility and brief explanation on the permit limitations and requirements and the decisions made in developing the permit. For any interested party, this history is readily available. The HPA and settlement agreement references are adequate for anyone desiring to obtain additional information from the City or a state agency.

The HPA and 1994 and 1997 Settlement Agreements are cited because they had a direct or indirect bearing on the requirements of the permit, and these settlement agreements were signed by Ecology. The Water Quality Certification (WDOE Order #94-2-01866) was for the outfall extension project, but does not bear upon the permit requirements. The City's Memorandum of Agreement with the S'Klallam Tribe and the City's 1991 settlement with Protect the Peninsula's Future are between the City and those entities;

these agreements were not signed by Ecology and do not bear upon the permit requirements. This does not in any way invalidate the City's responsibilities under these agreements. But they are not Ecology requirements and are therefore not included in the permit.

The decision to require sediment testing was based on a request by PPF during the 1997 Settlement discussions and a request by letter from DNR (Barth, October 15, 1996). The testing requirement was written to coordinate with the DNR easement requirement but was not based on it.

Comment:

I note that the NPDES Permit being renewed had a Permit Modification Notice of 9/3/97 presumably to satisfy the Order during the transition period. I did not comment and do not know the final modification date. The modification should be part of permit history. It would seem some "agreements" are included in the permit and some are not. The mysteries of G13 Compliance with other Laws and Statutes still remain.

Response:

The date of the mentioned Permit Modification was October 14, 1997. The agreements cited were signed by Ecology and have direct bearing on the NPDES permit. The allusion to G13 is unclear.

Comment:

Collection System Status, Page 2. I and I has been a very longtime problem for Sequim. I believe it remains a problem which will be addressed by S4D (Permit page 14). The report date of June 30, 1998 seems reasonable. However, financing of the needed solution will be a problem during this permit period. At least some reduction should be apparent during the period. It is important that S3F (Permit Page 11) be observed so that records are for real. The Class II Inspection of August, 1990 indicated a flow measurement problem. Correction of infiltration will be an ongoing effort, but should be considered in building and development and road projects so as to maximize limited funds. The greatest infiltration has been the High School/Middle School campus currently in construction. A quick check should be made for this area.

Response:

Comment acknowledged.

Comment:

Discharge outfall, Page 3. I am still of the belief that "mixing and dispersion of the discharge will be greatly improved with the construction of the outfall extension" has no advantage to the marine environment - only to the permit process approval chances. The permit writer has no control in this travesty.

Response:

Comment acknowledged.

Comment:

Permit status. The application received 9/10/96 at Page II-8 Notes #1 and #2 refer to testing performed by Battelle Northwest. Is this to continue? Is offshore testing to continue relative to the "new site" of the outfall?

Response:

The previous NPDES permit required the City to conduct water quality monitoring at the former outfall discharge site five times per year. The purpose of the monitoring requirement was to determine the bacterial and nutrient loading of the effluent to the receiving water and the effect of the effluent outside of the dilution zone. A review of the past three years of data shows no noticeable impacts from the effluent discharge at the outer limit of the dilution zone for the required parameters. Continuation of this monitoring requirement was not believed to be necessary or useful, particularly in light of the enhanced treatment processes, increased treatment reliability, and improved outfall diffusion recently constructed.

Comment:

Summary of Compliance. The Class 2 inspection on March 8, 1995 hardly qualified as a Class II Inspection. (See report of Dick Schroeder to Sequim's Parker 3/16/95). "The effluent looked nice and clear" is not a worthwhile comment from a Class II inspection. The most recent Class 2 inspection worthy of the name was accomplished by Lisa Zinner. August 1990. See her Recommendations and Conclusions pages 9 and 10. That inspection called for instantaneous flow measurement and repair of existing flowmeter. Loading could not be determined. I believe the Application form at page II-7 must have derived from this 1990 inspection. These inspections call into question Permit S3 F potential enforcement. As to past three years' DMRs good compliance - constant oversight by PPF and others may account for the 'good behavior' and further oversight is warranted.

Response:

Comment acknowledged.

Comment:

Proposed Permit Limitations and Conditions. Pages 4 to 9. This is the meat and what is being considered is laid out. The purpose of this for NPDES is to assure things will be better - not the same, not worse. I have a problem in that I do not see a finagle factor for comparing NTU measurement to TSS 30 or 40 and pounds per day figures nor do I see the relationship between total coliform to Fecal Coliform. Note that in Application Page II-5 total coliform is marked N/A. I don't think much of mixing zones or whole effluent toxicity but to keep the process going during effluent characterization I appreciate the requirement at S9 and S10.

Response:

There are no direct conversion factors for NTU (nephelometric turbidity unit) to TSS (total suspended solids) or for total coliform to fecal coliform. NTU and total coliform are parameters used in reclaimed water and are drawn from drinking water requirements. A reasonable assumption for an average limit of 2 NTU is a consistent TSS concentration of less than 10 mg/l. Achievement of a total coliform level of 2.2 per 100 ml or less can be assumed to be virtually free of fecal coliform.

Comment:

Sediment Quality, Page 9. It is not made clear what DNR believes would be gained from the former site examination requirement. Perhaps there has been a screw up in timing - as of this writing the dredge has already plowed through the "former site". I support the requirement for the "new site" - at least for its limited baseline attempt. S11 (Permit page 26) does the best it (sec) can with the non-information to be derived from the sediment standards as they now exist. I have a copy of Sediment Sampling and Analysis Plan - Revised Final of August 1997 (URS Greiner, Seattle). At least Mike (sec) Kyte has a functioning GPS. I always hope that the infauna would be recorded as part of the sediment sampling - but such was not required. I predict there will be no biodiversity left to measure by the time either WDOE or WDNR get around to requiring biodiversity baseline studies. (I realize this is not an NPDES permit requirement but I keep making the observation so that a likeminded administrator with clout could make it happen.)

Response:

The sediment sampling required at the former discharge site was accomplished prior to construction of the outfall extension. No significant sediment contamination was found.

Comment:

Monitoring and Reporting. This is always the most important section - it allows the observer to see how things are really going. Sometimes it takes a public records request. At least the listing in the Permit is a starting place. In connection with Permit S3J Reporting-Shellfish Protection, I am happy to report that both numbers listed on Page 13 have weekend, off hours real people actually available. The person at SWRO was ready to do something and there was a recorder triggering beeper system at DOH Shellfish. Note that theS13 (sec) Reclaimed Water Use C 4 calls for a report to the local health department in addition to other two agencies. A call off hours to Clallam County Environmental Health (360-417-2258) gets a leave a voice mail and we'll get back to you when we can - or call the secretary - who of course is not there either. It is possible that the County has not been made aware that it will have a responsibility when the whole deal is set up.

Response:

Comment acknowledged.

Comment:

Permit Page 10 at S2B I am puzzled by footnotes de and e. What would happen if a TMDL were to be in place for Sequim Bay or the (sec) Strait - non-attainment areas on 303(d) list? Would these footnotes change? Would not monitoring allow for appropriate decisions for wherever the effluent ends up? Are these parameters difficult or onerous for the permittee?

Response:

The reclaimed water discharge from the Sequim facility was determined to have no reasonable potential to cause an exceedance of the surface water quality standards for nitrogen or phosphorous. Therefore, monitoring for these parameters is not required while the reclaimed water is discharged to marine water. However, when the water is being reused, there is potential for nitrogen impact to ground water and nitrogen and phosphorous impact to freshwater, i.e., streams, ponds. Therefore, monitoring will be required if the reclaimed water is being reused. If a TMDL (total maximum daily load) were to be put in place for Sequim Bay or the Strait of Juan de Fuca for nitrogen and/or phosphorous, it is likely the monitoring requirements would change.

Comment:

Permit Page 26 at S12 - This is a good provision - I trust that this permit will not share the fate of City of Port Angeles' dilapidated diffuser debacle.

Response:

Comment acknowledged.

Comment:

Fact Sheet, Page 10 and Permit page 17 at S7 Residual Solids. As Kyle Dorsey's splendid effort is currently in review - all 77 pages plus (sec) a 23 page Fact Sheet it is likely that this permit can come under the General Permit for Biosolids Management. I understand this is possible as an update changing the old rules during the life of the permit. Devoutly to be wished.

Response:

Comment acknowledged.

RESPONSE TO COMMENTS

CITY OF SEQUIM
WATER RECLAMATION FACILITY
NPDES PERMIT NO. WA0022349

STREAM FLOW AUGMENTATION OF BELL CREEK PERMIT MODIFICATION

The following comments were received during the Public Notice of Permit Modification held for NPDES Permit No. WA0022349. The public notice lasted from September 19, 2001, through October 19, 2001. A Public hearing was not held.

Below is a listing of the comments received. Each comment is followed by the corresponding response, permit change (or lack of change), and the Ecology justification of the change (or lack of change).

Comments by Jim Bay, City of Sequim Director of Public Works

Comment #1: On page 7, in Special Condition S1.A.2, condition S14 is cited, but the permit does not have a condition S14.

Response #1: The reference to S14 is a typo, and should refer to S13, "Reclaimed Water Use." While correcting this typo, Ecology noted that the "Summary of Scheduled Permit Report Submittals" table on page 6 also contains similar typos. The table references to permit sections S12.A, S12.B, S13, S14.C.3, and S14.A, should in fact refer to S11.A, S11.B, S12, S13.C.3, and S13.A, respectively. These typos actually existed in the present permit, prior to the permit modification, but since they were brought to our attention, Ecology will take advantage of the permit modification to correct these typos. Thanks for pointing out the problem.

Comment #2: Both Conditions S11 and S12 are not clear as to whether they are annual requirements or meant to be done once during the permit term.

Response #2: These conditions are not part of the present permit modification and are not really open to additional comment at this time. While the conditions themselves are not real clear, the "Summary of Scheduled Permit Report Submittals" table on page 6 clearly states that the frequency is once per permit cycle. Since these conditions are not being modified, and since the permit does clarify the requirement elsewhere in the permit, no changes were made to the permit modification due to this comment.

Comment #3: The permit is not clear as to when it is ok to use the marine outfall. In order to maintain the outfall in working condition, occasional maintenance discharges will need to be directed to the marine outfall to keep it ready if it is needed in an emergency.

Response #3: The permit modification does not involve when it is acceptable to use the marine outfall. The modification adds a new stream flow augmentation option for beneficial reuse, but does not change the permit language about when the marine outfall can be used. The existing language in the present permit has no actual limit on when or how often the marine outfall can be used for the discharge of Class A reclaimed water. While the goal is for 100 percent reuse, Ecology realizes that not all of the planned reuse locations are on-line yet, and therefore some use of the marine outfall will continue for the transition period to reuse.

While the present permit does not contain limits on use of the marine outfall, it was decided by Ecology that this permit modification, which should help reduce use of the marine outfall by approval of another reuse location, would be done as a modification rather than a complete permit re-issuance. The reason for this decision is that by modifying the permit, the expiration date of March 4, 2003, stays the same, while if Ecology reissued the permit, the expiration date could be five years from now. The present expiration date of this permit was maintained so that when the permit needs to be rewritten in 2003, limits on the use of the marine outfall can then be imposed. It is expected that by then 100 percent reuse should be accomplished. Continuing maintenance discharges to the marine outfall are allowable for now, but will need to be examined in more detail for the next permit.

Comment by Frank Meriwether, Department of Health Shellfish Program

Comment: To make the modification clearer to the public, the flow used to determine the new ammonia limit should be discussed in the "Statement of Basis" for the modification.

Response: Good point. The flow used in determining the ammonia limit was taken from the permit application for the modification. The permit modification listed the beneficial stream flow augmentation of Bell Creek as ranging from an average daily flow of 0.37 million gallons per day (mgd) to maximum daily flow of 0.67 mgd (with 0.67 mgd being the annual average design flow of the reclaimed water plant). The flow in Bell Creek was reported as ranging from a low of 2.1 mgd to a high of 11.7 mgd, with an average of around 3 mgd. Ammonia levels in the Creek were mostly below detection, with one reading as high as 0.129 mg/l. The highest reclaimed water flow was used to determine a mixing factor. Using Creek pH and Temperature data provided in the application, the ammonia limit was calculated.

This limit has turned out to be rather conservative, since it does not appear the augmentation flow rate used in the calculations will be reached. The Washington Department of Fish and Wildlife in issuing the Hydraulic Project Approval limited the stream augmentation to 0.1 cubic feet per second (cfs), which is about 0.065 mgd. Fish and Wildlife determined that wide variations in flow could harm fish. The flow of 0.1 cfs is the most that Sequim felt they could consistently provide for stream flow augmentation, 24 hours a day, seven days a week. While Ecology expects Sequim to meet the requirements of the HPA and provide the consistent flow of 0.1 cfs, Ecology did not put this flow limit in the permit or revise the ammonia limit upward due to this low flow restriction. Ecology tried to make the permit flexible, so that if Fish and Wildlife decides a different flow level would be more beneficial to the Creek, then the flow level can be changed without the permit being modified again. After more data is collected over the next year, more restrictive requirements may be placed in the next discharge permit.

No change was made to the permit modification due to this comment, and while the "Statement of Basis" also was not changed, the information requested is provided in this response.

Comments by Eloise Kailin, President of Protect the Peninsula's Future

Comment #1: If a DNS was issued, we protest and herewith request a copy of the environmental document. The action is likely to have significant adverse environmental effects.

Response #1: A DNS was issued August 28, 1998. Public meetings on the DNS were held on August 12, August 19, and September 11, 1998, where your concerns on the environmental document could have more appropriately been raised. The present permit modification implements decisions made during the facility planning stage of the reuse project. The Sequim Water Reuse Taskforce in their March 1997 report, found that stream flow augmentation of Bell Creek would be one of the more environmentally beneficial uses of the Class A reclaimed water that was to be produced at the Sequim reclaimed water plant. The November 1998 *Comprehensive Wastewater Facility Plan* Amendment called for the stream

flow augmentation of Bell Creek as one of the beneficial uses of the reclaimed water. The Washington Department of Health and the Department of Ecology in early 1999 approved the facility plan amendment. In early 2000, Ecology approved the plans for the Water Reuse Demonstration Site, which included the outfall into Bell Creek. The Washington Department of Fish and Wildlife issued the Hydraulic Project Approval for the outfall to Bell Creek on May 15, 2001. The reuse site and the outfall have been constructed. The permit modification is the last act to allow for the beneficial reuse of the reclaimed water for stream flow augmentation of Bell Creek.

Through the planning process and the development of the permit modification, no adverse environmental effects of the stream flow augmentation were discovered. On the contrary, the stream flow augmentation appears to be an environmental benefit, if done correctly. The permit writer could find no reason to disregard all the previous decisions made to move forward with the beneficial use of the Class A reclaimed water to improve Bell Creek. Therefore, no changes were made to the permit modification due to this comment. If the commentator, or anyone else, would like to review any of the documentation of the decision on how to use the reclaimed water, she may contact Ecology's Southwest Regional Offices file room at (360) 407-6365 to make an appointment.

Comment #2: It is a step back and contrary to the provisions of the Clean Water Act to lesson protection for health and the environment.

Response #2: The beneficial use of reclaimed water is protective of health and the environment, and is an improvement over previous means of disposal for the wastewater prior to the construction of the reclaimed water facility. The comment letter states that the proposed change does not protect public health with respect to shellfish contamination. In fact, since the reclaimed water facility and new marine outfall have been constructed, the associated shellfish prohibited area has been reduced in size. In the July 1999 report by the Washington Department of Health on the shellfish closure zone around the mouth of Sequim Bay, it was explained that the size of closure zone was to be reduced, and then in January of 2000 the size of this closure zone was reduced. The July 1999 report by Health took into account the planned stream flow augmentation of Bell Creek with reclaimed water, so this permit modification will not cause a change in the present smaller closure zone in Washington Harbor or at its entrance into the Bay.

For this permit modification, a new limit for ammonia and additional sampling requirements were added to the permit, in order to improve the protection of the environment during the beneficial reuse of the reclaimed water for stream flow augmentation. The permit has been made stricter, and a new beneficial reuse has been approved. The protections for health and the environment have been improved consistent with the provisions of the Clean Water Act. No changes to the permit modification were made due to this comment.

Comment #3: We call for a Biologic Assessment due to impacts on ESA stocks in the Dungeness River.

Response #3: The beneficial reuse of stream flow augmentation of Bell Creek is meant to help flows and ESA stocks in the Dungeness River. Much of the flow of Bell Creek is from irrigation withdraws from the Dungeness that eventually end up in Bell Creek. By replacing these irrigation flows with reclaimed water, improvements and flow reductions can be made to the irrigation systems to help the Dungeness, while at the same time not hurting Bell Creek. While the City has plans to study the effects of the reclaimed water on Bell Creek, including biomonitoring, a Biologic Assessment of the Dungeness River is beyond the scope of this permit modification. No changes to the permit modification were made due to this comment.

Comment #4: The proposed permit violates conditions specified in a Settlement Agreement.

Response #4: The permit modification does not violate any condition in any settlement agreement. The goal of the reclaimed water program is the beneficial reuse of 100% of the Class A reclaimed water. The beneficial use of the water for stream flow augmentation has been one of the planned uses for the water, and what some would claim is the most environmentally beneficial reuse being planned. The modification does not rely on receiving water for the disposal of waste effluent, since with beneficial reuse there is no waste being disposed of. The receiving water is being improved with stream flow augmentation, consistent with the goals of the Settlement Agreements.

The comment letter also claims the permit violates Settlement Agreements because the Total Coliform limit does not provide the required viral protection and because the permit defines upset criteria differently then the Agreements. But, neither of these issues have a direct bearing on the present modification, since the Total Coliform limit and definition of upset remain unchanged in the permit. Comments on these issues should have been submitted during the comment period for the original permit, not during the comment period for this modification. No changes to the permit modification were made due to this comment.

Comment #5: If the decision of Ecology is to go forward with this we do call for a hearing, and if this is to occur, we ask for a strike/delete copy of the permit changes proposed.

Response #5: Ecology has considered the request for a public hearing and has decided against it for two reasons: 1) There is insufficient public interest to warrant a hearing; and 2) of the comments received, most are directed at decisions made previously during the planning stages of the project – decisions that were made with ample opportunity for public input. Therefore, no changes to the permit modification were made due to this comment, and the modification will be issued as planned.